

# ALION

We bring together virtual and augmented reality to create lifelike training environments and scenarios.

## MIXED REALITY TRAINING

Real-World Environments to Help You Train Like You Fight

### MERGING REALITIES FOR MAXIMUM RESULTS

The nature of how we interact with computers is changing. Humans can now be safely immersed into virtual, augmented, and mixed reality environments for a level of insight and interaction that was not previously possible.

While the applications of this powerful capability are far-reaching, training is one of the best use cases for mixed reality technology. We see it being implemented by governments and companies around the globe to deliver effective, economical, hands-on training that is nearly impossible to replicate in the real world.

But the value of mixed reality training can only be realized when these tools are informed by live data and integrated across users, systems, and platforms. By integrating mixed reality as part of a holistic live, virtual, and constructive (LVC) training environment, today's U.S. Armed Forces can prepare using the same scenarios, obstacles, and teamwork that they will use on the field of battle, no matter how it changes.

### LEADERS IN LVC TRAINING FOR DEFENSE

With industry-leading mixed reality solutions, Alion delivers training that allows users to take advantage of their natural senses and innate reactions in an immersive, realistic experience that helps them better prepare for real-world mission situations.

We design, develop, and operate secure LVC training capabilities for our defense and national security clients, using open architectures and open software to deliver best-of-breed solutions. We make systems come together through technology and services support, uniting teams from across branches who may have never interacted before, no matter where they are located.

Through our proven rapid prototyping techniques, we quickly deliver fully integrated environments that help you train like you fight, because we understand that preparation requires full coordination, not readiness in piece parts. At Alion, we are making the future of training a reality at the point of need— today, tomorrow, and in the battles that will come.



# ALION'S MIXED REALITY TRAINING SOLUTIONS

Training done right means the people who brave battle are prepared for whatever comes their way, so they can make their way home. Our engineers, technologists, program managers, and first-class experts apply an agile engineering methodology to every project and problem, saving time and money for our clients while delivering unparalleled mixed reality solutions to support your training objectives.



## SYNTHETIC REALITY

Using advanced 3D scanning and modeling tools, Alion's designers create training environments based on your distinct specifications that vividly and accurately reflect the real-world environments that users will encounter on the field of battle.



## VIRTUAL REALITY

We can develop custom virtual reality environments for any mission or objective, to deliver training that immerses users into the battlespace as if they were actually there, so they can use their senses to respond and analyze information more quickly and effectively.



## AUGMENTED REALITY

By providing live or scripted data on a wearable device that overlays the real-world environment, our augmented reality training solutions let warfighters quickly fuse and respond to disparate sets of information for a true-to-life readiness experience.



## MIXED REALITY

Our mixed reality trainers bring together the real world with computer-generated representations to allow users to seamlessly interact with both in a cohesive, interoperable environment that vividly mimics what they'll encounter in battle.

## SPOTLIGHT ON: VIRTUAL BRIDGE TRAINER

Few things can replace the experience of standing on the bridge of a U.S. Navy ship, maneuvering the marine aspects of a joint operation with air and ground forces. By combining actual 3-D bridge models and using the commercial game engine Unity3D as a framework, we developed a first-of-its-kind trainer that allows users to virtually walk the bridge of a ship and interact with specific components in an LVC environment. The result is virtual reality training built from the specs of a real Navy vessel that can interact across platforms for a truly integrated training experience.



## About Alion Science and Technology

At Alion, we combine large company resources with small business responsiveness to design and deliver mission-critical engineering solutions. With an 80-year technical heritage and an employee-base comprised of more than 30% veterans, our engineers, technologists, and program managers bring together an agile engineering methodology and the best tools on the market to deliver mission success faster and at lower costs. Based just outside of Washington, D.C., we help clients turn big ideas into real solutions. For more information, visit [www.alionscience.com/mixedreality](http://www.alionscience.com/mixedreality).

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